Name _____

Answer Key

Welcome to the American Museum of Natural History!
Today you will learn about *Tyrannosaurus rex* (*T. rex*) and the group of animals it belongs to, called tyrannosaurs. These animals all went extinct long before humans were around. But by studying the fossils they left behind, we know more about them now than ever before!

Note to Educator: Some of the prompts on this worksheet require students to talk to a partner. Location names refer to the map in the Educator's Guide.

1. **Look** at the model of the one-year-old *T. rex*. **Talk** to a partner about what you notice about this young animal and the shadow of the adult it could become. Does anything surprise you? **Take notes** about what you both observed.

Answers will vary but may include:

- It is very small, covered in feathers, and has big eyes.
- The adult looks much bigger!

2. **Choose** one of the early relatives of *T. rex*. **Sketch** and **label** some of its interesting features, both from the model and from its accompanying skull fossil.

Early tyrannosaur models are found at location 2b.

Choices include:
- *Protoceratosaurus bradleyi*
- *Dilong paradoxus*
- *Xionglong baimuensis*

What does the fossil tell us about this tyrannosaur?

Answers will vary.

Talk to a partner about what you each sketched. Have a conversation about similarities and differences you notice between the different animals.

Continue the conversation with your partner at the *T. rex* traits wall. How are these animals similar to and different from *T. rex*? **Location 2c.**

Name _____

Answer Key

3. Look at the model of the four-year-old *T. rex* and read the panels in front of it. **Talk** to a partner about what you notice about this *T. rex* and how it compares to the hatchling at the beginning of the exhibition. **Take notes** about what you both observed:

Answers will vary but may include:

- When *T. rex* is younger, it is lighter and has long legs so it could run fast to escape predators; when it is older it doesn't need to run as fast.
- Younger *T. rex* has sharp teeth to slice meat, but they aren't strong enough to crush bones like an adult's.
- *T. rex* has lots of feathers, probably for warmth and camouflage, when it is young; when it is older it has fewer feathers.

4. Look at the model of the adult *T. rex* and read the panels around it. **Talk** to a partner about what you notice about this *T. rex*, and how it compares to the hatchling and the four-year-old *T. rex*. **Take notes** about what you both observed:

Answers will vary but may include:

- Adult *T. rex* is much bigger than the others.
- It has giant teeth and jaws, and its arms are too tiny to do anything.
- It uses its giant teeth and jaws for catching and crushing the bones of its prey.
- It has big eyes that face forward for excellent vision and depth perception.
- It may have had a very sensitive face and an excellent sense of smell.

Name _____

Answer Key

5. Choose two fossils from anywhere in the exhibition. **Sketch** and **label** them.

FOSSIL NAME 1: _____

Locations and names of all fossils in the exhibition:

1b. *T. rex* vertebra
2a. *Protoceratosaurus bradleyi* skull
2b. *Dilong paradoxus* skull
2f. *Xiongguanlon baiorensis* skull
3a. *T. rex* toe bone
3a. *T. rex* thigh bone
3d. Adult *Tarbosaurus* skeleton
3d. Adult *Tarbosaurus* skull
3f. Growth rings in fossil bones
3f. *Nanotyrannus* skull
4a. *T. rex* skeleton
4b. Tyrannosaur claw
4b. *T. rex* tooth
4b. *Alioramus altai* jaw
4b. *T. rex* partial jaw
4e. *Tarbosaurus bataar* tooth
4e. *Alioramus altai* skull
4f. Coprolite
4f. Bite marks in vertebra fossil
5b. *T. rex* skull (adolescent)
5c. *Daspletosaurus torosus* skull
5c. *Guanlong wucaii* skull
5c. *T. rex* partial skull
5e. *T. rex* skin impressions

What does this fossil tell us about the tyrannosaur it came from?

Answers will vary.

Name _____

Answer Key

FOSSIL NAME 2: _____

What does this fossil tell us about the tyrannosaur it came from?

Answers will vary.

6. **Visit** the survival challenge stations with a partner. Take turns trying them out. **Talk** about the decisions you made and what happened.

Note to Educator:
These stations can be found at locations 2d, 3b, 4d, and 5c.

 Name _____

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4. Look at the model of the adult *T. rex* and read the panels around it. **Talk** to a partner about what you notice about this *T. rex*, and how it compares to the hatchling and the four-year-old *T. rex*. **Take notes** about what you both observed:

 Name _____

5. Choose two fossils from anywhere in the exhibition. **Sketch** and **label** them.

FOSSIL NAME 1: _____

What does this fossil tell us about the tyrannosaur it came from?

 Name _____

FOSSIL NAME 2: _____

What does this fossil tell us about the tyrannosaur it came from?

_____

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_____

6. Visit the survival challenge stations with a partner. Take turns trying them out. **Talk** about the decisions you made and what happened.

